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Number 159

July, 1927.

# TAXONOMIC INVESTIGATIONS

S. A. Rohwer, Senior Entomologist, in Charge

August Busck left on July 10 for a collecting trip at Cape Henry, Va. He spent about two weeks collecting in the marshes and cypress swamps around Norfolk, and obtained some interesting specimens of Lepidoptera and other orders, among which were several larvae of Sphinx isoparce.

- Dr. A. G. Böving's paper on "The Classification of the Mylabridae-Larvae" appeared in the June number of the Proceedings of the Entomological Society of Washington.
- L. G. Baumhofer recently sent to the Division specimens which represent a recovery of one of the parasites introduced two years ago into the Nebraska National Forest for the control of the tip-moth. The parasite is Campoplex frustranae Cushman, the determination of which R. A. Cushman, who described the species, has verified.

#### BEE CULTURE INVESTIGATIONS

James I. Hambleton, Apiculturist, in Charge

Carlton E. Burnside has been appointed Assistant Apiculturist. During the past few years he has been temporarily employed at the Bee Culture Laboratory to investigate fungus diseases of the honeybee.

In July Jas. I. Hambleton made an inspection trip to the Intermountain Bee Culture Field Station at Laramie, Wyo. In the course of this trip he spoke before beekeepers' meetings in North Dakota, Iowa, and Nebraska. Much interest was shown in the new Federal honey grades.

W. C. Northrup and C. Harry Linsley have resigned their positions as Field Assistants at the Intermountain Bee Culture Field Station, Laramie, Wyo., the work for which they were engaged no longer necessitating the services of temporary helpers.

#### CEREAL AND FORAGE INSECT INVESTIGATIONS

### W. H. Larrimer, Senior Entomologist, in Charge

Among the recent visitors to the Arlington, Mass., corn borer laboratory were Dr. Stanislaw P. Minkiewicz, of the Government Institute for Agricultural Research, Pulawy, Poland; Dr. F. G. Spruijt, of the Landboiew Hoogeschool, Wageningen, Holland; Dr. F. G. Holdaway and Stanley Garthside, of the Australian Council for Scientific and Industrial Research; C. R. Phipps and C. A. Crooks, of the University of Maine; Prof. Roger C. Smith, of the Kansas State Agricultural College; and J. L. King and Dr. H. W. Allen, of the Japanese Beetle Laboratory.

Recent additions to the corn borer investigational staff at Arlington, Mass., include Dr. C. H. Batchelder and E. S. Mack, formerly on the staff of the University of Maine; D. D. Questel, a recent graduate of the University of Illinois; H. G. Guy, of the University of Florida; R. A. Biron, a recent graduate of the Massachusetts Agricultural College; James Wallace, of Harvard University; M. J. Sawyer, of Norwich University; and R. G. Lassiter, a recent graduate of Guilford College, N. C.

In the week of June 13 R. C. Ellis, of the Arlington, Mass., Laboratory, conveyed a shipment of imported corn borer parasites from Arlington to Sandusky, Ohio, for liberation in the corn borer area there. A similar consignment of parasites was conveyed from Arlington to Monroe and Erie, Mich., by W. A. Baker.

- R. M. Jones, of the University of Florida, has been assigned temporarily to the Sandusky, Ohio, corn borer laboratory.
- A. E. Pillsbury, a recent graduate of the University of New Hampshire, has been appointed Junior Entomologist and assigned to the Silver Creek, N. Y., corn borer laboratory. L. W. Zeigler, of the University of Florida, has been assigned temporarily to the same laboratory.
- F. L. Simanton has been appointed Associate Entomologist, for duty at the Monroe, Mich., corn borer laboratory.
- J. W. Frankenfeld, a recent graduate of the University of Illinois, has been appointed Junior Entomologist and assigned to the Sandusky, Ohio, laboratory.
- G. A. Ficht, of the Purdue Agricultural Experiment Station, is located at the Monroe, Mich., corn borer laboratory, where he is associated with Dr. Luginbil! in biological studies of the corn borer.

On June 22 Dr. C. H. Batchelder, of the Arlington, Mass., laboratory, was in conference with Director Crocker and Doctors Arthur, Vincent, and Hartzel, of the Boyce-Thompson Institute of Plant Research, at Yonkers, N. Y., relative to the cooperative project between the Institute and the Bureau.

M. E. Ryberg, a recent graduate of the University of Minnesota, has been appointed agent and assigned to the Boyce-Thompson Institute of Plant Research, at Yonkers, N. Y., for duty in connection with a cooperative project between the Institute and the Bureau,

A portion of the foreign parasites of the corn borer which have been shipped from Arlington to the middle West for liberation in the field have included adults of Angitia punctoria Roman, which were reared from corn borer material collected in New England. This foreign parasite of the corn borer, originally introduced into New England, has been recovered in increasing numbers each year in that area, and is now being used for recolonization.

D. J. Caffrey returned to Headquarters at Arlington. Mass., on July 2, after spending the greater part of April, May, and June in the middle West, in connection with the corn borer clean-up campaign and the various corn borer research projects under way in that section.

Adults of the imported corn borer parasite Exeristes roborator Fab. have been recovered in the parasite conservation cages at Monroe and Erie, Mich., and at Sandusky, Ohio.

D. W. Jones and B. E. Hodgson were at Amherst, Mass., on May 31, for a conference with Director S. B. Haskell relative to the cooperative project between the Massachusetts Experiment Station and the Bureau.

Recent visitors at the Monroe, Mich., corn borer laboratory included Prof. H. F. Wilson, of the University of Wisconsin; Prof. J. J. Davis and Dr. Kraybill, of Purdue University; Prof. C. W. Woodworth, of the University of California, and Dr. Herbert Osborn and Herbert Osborn, Jr., of the Ohio State University.

- T. E. Holloway, in charge of the New Orleans, La., field station, was in Washington July 8 to 11, inclusive, for conference relative to dusting operations.
- Dr. W. H. Larrimer attended the corn borer conference at Toledo on July 20 and 21.
- F. W. Poos, of the Virginia Truck Crop Experiment Station, spent a few hours in the Washington office on July 23. He was formerly connected with the European corn borer research work of this bureau.
- L. H. Worthley, of the Toledo office, was in Washington July 9, for conference on matters relating to corn borer control.

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#### GIPSY MOTH AND BROWN-TAIL MOTH INVESTIGATIONS

- A. F. Burgess, Senior Entomologist, In Charge
- A. F. Burgess spent the week of June 20 in Washington, D. C., conferring with Bureau officials.
- A. F. Burgess, S. S. Crossman, H. L. Blaisdell, and C. W. Collins spent June 30 visiting the gipsy moth infestations in the territory between Brockton, Fall River, and New Bedford, Mass., where thousands of acres of woodland have been defoliated this season. On July 1 a large part of the territory east of Cape Cod Canal was inspected, and although there is much defoliation there it does not appear to be as severe as in last year.
  - A. F. Burgess spent several days in Washington in the week of July 10.

On July 12 and 13 the Secretary of Agriculture of New Jersey, W. D. Duryce, and Mrs. Duryce, State Senator David H. Agans and Mrs. Agans, and Harry B. Weiss, Chief of the Bureau of Statistics and Inspection, accompanied by S. S. Crossman and H. L. Blaisdell, visited a considerable part of Cape Cod and the territory south of Taunton and Middleboro. The visitors from New Jersey were very much interested in the gipsy moth situation, and returned to New Jersey knowing by their own observations the havoc that the gipsy moth can produce when present in large numbers.

Commissioners Edward F. Hall, of New Britain, and W. A. Kendrick, of New Haven, of the Connecticut State Board of Finance and Control, with Dr. W. E. Britton, State Entomologist, and J. T. Ashworth, Deputy in Charge of Moth Work, with C. W. Collins, spent July 12 in Bristol County, Mass., viewing large areas which were defoliated by the gipsy moth this summer.

At Bound Brook, N. J., on July 20, A. F. Burgess and H. L. Blaisdell had a conference with H. L. McIntyre, Supervisor, Forest Pest Control, Conservation Department, Albany, N. Y., where the gipsy moth work was discussed. Accompanied by Mr. McIntyre they were then shown the State gipsy moth work on Long Island, where several infestations were visited. The 22d of July was spent in conference with Federal field men at the storehouse at Pittsfield, Mass. The following day they attended the summer meeting of the Massachusetts Tree Wardens and Foresters Association at Worcester, Mass.

- W. N. Dovener, of the Bureau, is spending a few weeks in Massachusetts preparing a painting to illustrate woodland defoliation caused by the feeding of the gipsy moth larvae.
- C. A. Lindstrom, of the Office of Motion Pictures, Department of Agriculture, Washington, D. C., spent June 28 and July 15 at the gipsy moth office and laboratory in connection with a new motion picture which is being made of the gipsy moth and brown-tail moth work.

Among the recent visitors at the gipsy moth laboratory have been J. L. Kin and H. W. Allen, of the Japanese Beetle Investigations; F. I. Spruijt of the Horticultural Commission of California; Dr. S. Minkiewicz, Entomologist of the Institute of Agricultural Research at Pulawy, Poland; F. G. Holdaway and S. Garthside, entomologists from Melbourne, Australia; Dr. R. W. Glaser of the Rockefeller Institute for Medical Research at Princeton, N. J.; R. C. Smith, Professor of Entomology at Manhattan, Kans.; Dr. N. Yagi, Entomologist at Kyoto, Imperial University of Japan; and Allen Swain, of Boston, and Charles Ricker, of Poland Springs, Me.

# JAPANESE BEETLE INVESTIGATIONS

Loren B. Smith, Senior Entomologist, in Charge

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After having been colonized for three years in the Japanese Beetle area, the single-generation dexild parasite Prosena siberite has finally been recovered at the Moorsetown, N. J., colony center. This is the third imported parasite of the Japanese beetle to have been recovered, the other two being the tachinid Centeter cinerea, which destroys the beetles, and the scolid Tiphia popilliavora, attacking the grub stage.

Shipments of <u>Dexia ventralis</u>, a Korean fly attacking a number of scarabaeic larvae, and a Tiphia attacking Anomala, were recently sent from the station at Riverton, N. J., to H. C. Hallock, at Westbury, L. I., for trial colonization in the territory infested with the oriental Anomala and Aserica.

In the present season the colonizations of <u>Prosena siberita</u>, <u>Ochromeigenia</u> ormicides, <u>Tiphia vernalis</u>, and the so-called "Japanese red-legged" <u>Tiphia have been much larger and more satisfactory than in former years. This achievement has been due in large measure to the excellence of the shipments from Japan, and to the gradual improvement in the technique of handling at the receiving station.</u>

The Federal Government and the States of New Jersey, Pennsylvania, Delaware. New York, and Connecticut now employ cooperatively 517 men on Japanese beetle quarantine work. Of these, 151 are located in New Jersey, 180 in Pennsylvania, 40 in Delaware, 79 in New York, and 49 in Connecticut, and 18 men are engaged in scouting operations outside of the present regulated area. The majority of these men are employed temporarily for the summer months, beginning their work July 5, and continuing until the middle of September.

Marshall Kerry, of Macon, Ga., a student at the Jefferson Medical College, has accepted a temporary appointment at this laboratory, where he has been assigned to the ecological section.

#### COTTON INSECT INVESTIGATIONS

#### INVESTIGATIONS OF INSECTS AFFECTING MAN AND ANIMALS

- J. L. Webb, Associate Entomologist, Acting in Charge
- W. E. Dove, who resigned from the Bureau of Entomology last October to pursue graduate studies at Johns Hopkins University, was reappointed in the Bureau of Entomology on June 1. He will continue investigational work on insects which affect livestock, with headquarters at Dallas, Tex.
- H. M. Brundrett, Professor of Horticulture at John Tarleton Junior Agricultural College, Stephensville, Tex., has been appointed by the Bureau of Entomology for work at Dallas, Tex., during the summer season. He will continue investigations, begun by him two years ago, of sprays against flies which affect livestock.
- On July 13 and 14, F. C. Bishopp attended the Short Course conducted by the Texas A. & M. College at the Medina-Hereford Ranch, and gave two talks, one on the control of external parasites of poultry, and the other on the control of the screw worm, with special reference to the use of flytraps.
- Early in July F. C. Bishopp spent some time going over the organized screwworm control area in Menard County, Tex., and incidentally discussed the screwworm and the use of flytraps on the range before a meeting of stockmen held at the Martin Ranch, under the auspices of the Texas A. & M. College.
- Gonzalo Merino, of the Philippine Bureau of Agriculture, spent July 18 and 19 at the Dallas, Tex., laboratory, studying the experimental work under way on insects affecting livestock and poultry.
- R. T. Alexander, R. L. Callihan, G. L. Hales, L. Johnson, L. J. Padget, J. C. Pearson, and J. K. V. Stewart have been appointed to assist in the experiments conducted at Tallulah, La., for the control of the cotton boll weevil. W. A. Brunson and G. M. Stone will assist in boll weevil control experiments at Florence, S. C.
- Dr. F. A. Fenton has been transferred from the Cotton Boll Weevil project to the Miscellaneous Cotton Insect Project, and assigned to work on the pink bollworm with headquarters at El Paso, Tex. His present address is 1013 Mills Building, El Paso.
- O. G. Babcock took part in the program of the Short Course held at College Station, Tex., July 25 to 29. His lecture on the external parasites of poultry proved of special interest to the large group making a special study of poultry raising.

On July 18 a storm of hurricane proportions destroyed the hangar at Monroe, La., in which, at the time, two dusting planes belonging to the Bureau were housed. In the collapse of the hangar the planes were practically destroyed. Arrangements are being made for immediate replacement of one of the planes, in order that experimental work already under way may be completed.

E. C. Pattee, Junior Chemist, and R. H. Flake, Machinist, stationed at the Cotton Insect Laboratory at Tallulah, have recently resigned.

#### TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Senior Entomologist, in Charge

The field men in the Eastern States are especially requested to make observations and reports on the occurrence of the Mexican bean beetle in their territory. This pest has apparently spread more rapidly this season than in any other since its introduction into the Eastern States. It has been reported from Norfolk, Arlington, and Vienna, Va.; Lumberton, N. C., and Lambertville, Mich. Since the beetle apparently favors rolling land of the pine-forest and oak-forest type, it would be of importance to determine whether or not it will survive the winter in the eastern coastal plain.

K. L. Cockerham, of Biloxi, Miss., reports that in June an intensive survey and "clean-up" of old sweet-potato seed beds was completed on all of the fields in Mississippi that had previously shown infestation by the sweet-potato weevil. About 300 seed beds were inspected and destroyed. Infestations were found on only two farms. Similar work was done in Mobile County, Ala., revealing only one infestation.

Mr. Cockerham also reports that on July 7, early sweet potatoes began to be shipped from Foley, in Baldwin County, Ala., out of the area previously infested by the sweet-potato weevil. In order to make a close inspection of these potatoes as they were being shipped, the State Department of Agriculture of Alabama, in cooperation with the Bureau of Entomology, sent several men to Foley to handle the inspections in the shipping sheds. In this way many thousand bushels of potatoes can be inspected in a comparatively short time. During the first ten days of the shipping season 58 cars of potatoes were shipped from this area. Several hundred cars of potatoes move out of the area each season.

G. A. Orum and H. I. West have been given temporary appointments as Field Assistants, to assist in inspection work on the sweet-potato weevil at Foley, Ala. Mr. Orum reported for duty on July 15, and Mr. West on July 18.

#### STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, Senior Entomologist, in Charge

The June, 1927, issue of "Refrigerating Engineering" carries a short article by E. A. Back and R. T. Cotton entitled "Effect of Cold Storage Upon Clothes Moths."

On July 8 the Bureau received from B. R. Beall, Special Representative of the Claim Prevention Department of the Chicago, Rock Island and Pacific Railway Company, a copy of the published "Proceedings, Millers' Export inspection Bureau and Railroad Representatives."

Dr. E. A. Back attended the convention of the National Furniture Warehousemen's Association, held in the Grand Hotel, Mackinac Island, Mich., July 8 to 13.

On July 5 a conference regarding insects was held at Sacramento, Calif. Among those present were Lee Strong, of the California State Department of Agriculture, D. K. Grady, of San Francisco, Secretary of the California Dried Fruit Association, Perez Simmons and W. D. Reed, of the Bureau's laboratory at Fresno, Calif., and Prof. O'Kane, of the Crop Protection Institute.

J. C. Hamlin returned to Fresno July 12, after spending a month in the East.

During July Geo. W. Ellington has been collecting large numbers of samples of wheat from eastern wheat fields, as part of the program in connection with the Angoumois grain moth investigation.

Sr. Manuel E. Odriozola, of Peru, visited this office in July to obtain information regarding the latest developments in bean weevil control.

# FOREST INSECT INVESTIGATIONS

- F. C. Craighead, Senior Entomologist, in Charge
- Dr. F. C. Craighead left Missoula, Mont., on July 16 for Coeur d'Alene, Idaho. From the latter point he proceeded to the Colorado National Forest, where studies of the Black Hills beetle are being conducted.
- G. F. Holdaway and Stanley Garthside, of Australia, were recent visitors at this office. Mr. Garthside left Washington to visit the branch field station at Bent Creek, near Asheville, N. C., and expects to spend the winter working with Dr. S. A. Graham, at the University of Michigan, or in the University of Minnesota.

## TROPICAL AND SUBTROPICAL PLANT INSECT INVESTIGATIONS

A. C. Baker, Senior Entomologist, in Charge

Ground has been broken for a new building for the Tropical Insect work in New Orleans. It will contain office and laboratory quarters, a cold room controlled by a refrigeration plant, greenhouse and insectary units, and a shop for the construction of special apparatus. Storage space is provided for spray machinery and other field equipment, and two acres adjacent to the buildings are allotted for special experimental plots. The laboratory will contain a battery of incubators and other special apparatus for study under controlled conditions, and full equipment will be provided for the statistical analysis of data gathered in field experimentation where conditions are not under control. Thus factors developed by an analysis of the varying conditions in the field can be studied in parallel series under control in the laboratory.

### LIBRARY

Mabel Colcord, Librarian

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